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# A DESCRIPTIVE SUMMARY OF ACTIVE-DUTY DEATHS IN THE U. S. NAVY IN 1986

J. C. HELMKAMP

L. L. BALAZS

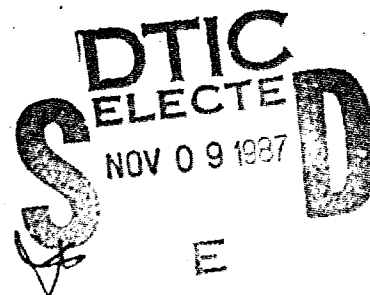
P. A. COBEN

REPORT NO. 87-23

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NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND  
BETHESDA, MARYLAND



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A Descriptive Summary of Active-duty Deaths in the  
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## Summary

Summaries of mortality are useful in describing deaths within various populations; however, in the Navy, information which annually characterizes deaths is generally not available for several years. The objective of this study was to describe deaths among Navy personnel during 1986 by using a source that would provide the most complete information in the shortest time.

The Report of Casualty (DD Form 1300), prepared on all active-duty Navy deaths by the Naval Military Personnel Command, provided a source of case ascertainment of 1986 deaths (N=491). Information in the Report of Casualty form included basic demographic data such as age, sex, race, occupational specialty, and paygrade. Additional information that contributed to a broader description of each death on the Report of Casualty form included time and place of death, and the cause and circumstance associated with death.

The highest crude mortality rates occurred in 23-24 year olds, males, caucasians, and E-5's. Eighty-eight percent of the 1986 deaths occurred among enlisted personnel; 26 percent of those among marine engineering, aviation maintenance, and weapons specialties. Nearly two-thirds of the deaths occurred in members who had less than 10 years' active duty. Saturday was the most frequent day of death. One-third of the 1986 deaths occurred in the South Atlantic region and an additional 29 percent in the Pacific region. Motor vehicle-related deaths were the most frequent contributing cause of mortality, accounting for 42 percent of deaths.

The Report of Casualty is a source of Navy mortality data that provides basic demographic and descriptive information in a shorter time compared to more traditional sources. Use of this information will permit more timely observation of temporal and geographic trends.

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**A Descriptive Summary of Active-duty Deaths in the  
U.S. Navy in 1986**

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Patricia A. Coben

**Introduction**

Summaries of mortality are very useful in collectively describing deaths within broadly or narrowly defined populations for specified periods of time. Comparisons by age, sex, race, and geographical area are often used to further characterize various causes of death. Historically, these summaries often take an extended period of time to prepare to insure accuracy and completeness.

"Provisional" mortality statistics for the United States for any given year are published by the National Center for Health Statistics (NCHS) approximately nine months after and "final" statistics approximately four and one-half years after the completion of a specific calendar year. For example, provisional mortality data for 1985 was published by NCHS in September 1986<sup>1</sup> and final data for 1981 and 1982 in August 1986<sup>2</sup> and December 1986<sup>3</sup> respectively.

In the Navy, final annual morbidity and mortality data including information on the incidence of illness and injury, medical noneffectiveness, separations, deaths and outpatient visits for active-duty Navy and Marine Corps personnel are prepared by the Naval Medical Command and the Naval Medical Data Services Center and published by the Department of the Navy.

The following list summarizes the Navy's experience during the 13-year period 1967-1979<sup>4</sup>. An average of 50.4 months elapsed between the end of a report period and the publication of the medical statistics for that period. The 1978-1979 annual summary is the most current comprehensive medical data available on Navy and Marine Corps personnel. Conversion to the Ninth Revision of the International Classification of Diseases (ICD-9), which became effective in 1980, and the Clinical Modification (CM) to this revision in 1986 has delayed more recent annual summaries.

<u>Report period</u>	<u>Publication date</u>	<u>Months*</u>
1978 - 1979	March 1984	51
1977	September 1981	45
1975 - 1976	January 1980	37
1973 - 1974	February 1978	38
1971 - 1972	March 1977	51
1970	March 1976	63
1969	August 1974	56
1968	June 1973	54
1967	November 1972	59

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\*Count begins the January after the end of the report period and continues through the month of publication.

Provisional Navy and Marine Corps mortality and morbidity data are not currently published on a routine basis; however, ad hoc inquiries may be made to the Naval Medical Command.

The annual automated death data that the Naval Health Research Center receives from the Naval Medical Data Services Center generally take between 6 months and a year to prepare to insure accuracy and completeness.

The objective of this study was to describe deaths among Navy personnel during 1986 by using a source that would provide the most complete information in the shortest time. This information included basic demographic data and additional information that would contribute to a broader description of death. The Report of Casualty, prepared on all active-duty Navy deaths, satisfied these data requirements.

#### Methods

The Naval Health Research Center (NHRC) has recently developed a Death Registry as a segment of its comprehensive Medical History File. This file allows a rapid means of case ascertainment among active-duty Navy personnel. The Death Registry contains two major components: (1) Report of Casualty (DD Form 1300) prepared by the Casualty Assistance Branch of the Naval Military Personnel Command (NMPC) in Washington, D.C. for all deaths among active-duty Navy enlisted and officer personnel, and (2) Computerized Death Record for all active-duty Navy enlisted and officer personnel. The Computerized Death



Record is compiled by the Naval Medical Data Services Center in Bethesda, Maryland, and maintained at NHRC. This record contains basic demographic and service history information including age at death, race, sex, paygrade, length of service, occupation, duty station, and date and place of death including the reporting facility.

Normally the Computerized Death Record is not complete, for analytical purposes, for about a year whereas the DD 1300 is generally completed by NMPC within three weeks of the report of death and forwarded to NHRC immediately. The Report of Casualty (DD Form 1300) was used for this study. DD 1300s were received on 494 active-duty Navy members who died in 1986; three were midshipman and were removed from the study group. Appendix A provides a sample DD 1300 with key data elements highlighted.

Variable-specific quarterly population counts for all enlisted and officer personnel from NHRC's Population Denominator Count File<sup>5</sup> were used to provide an average 1986 Navy population (N = 598,313). Crude mortality rates were calculated for sex, race, and paygrade. Geographical regions described in this report are based on definitions used by the National Center for Health Statistics<sup>1</sup>.

### Results

Table 1 presents age-specific mortality rates for all causes among active-duty Navy personnel. The highest rate occurred in 23-24 year olds and the lowest rate in 30-34 year olds (92.1 and 70.3 per 100,000, respectively). The youngest and oldest groups had the same rate of 90.6 per 100,000.

The crude mortality rate was 2.3 times higher among males than females as shown in Table 2. The crude mortality rate among blacks was somewhat lower than for caucasians; and among other races, half the rate for caucasians.

Mortality differences across paygrades are presented in Table 3. Among enlisted personnel it is interesting to note that the highest rate occurred in E5s and the lowest rate in the next senior paygrade, E6 (96.4 and 56.6 per 100,000 respectively). Among officers all but 4 deaths were O5 and below and the crude mortality rate for the O1-O5 group was well below the total Navy rate of 82.1 per 100,000.

Table 1

1986 Age-specific Mortality Rates Among Active-duty  
Personnel by Age Group

Age Group	No. of Deaths	Mortality Rate per 100,000
≤ 19	52	90.6
20-22	124	88.1
23-24	74	92.1
25-29	99	71.6
30-34	58	70.3
35-39	48	82.3
≥ 40	36	90.6

Table 2

1986 Crude Mortality Rates Among Active-duty  
Personnel by Demographic Characteristic

Characteristic	No. of Deaths	Mortality Rate per 100,000
Sex		
Male	470	86.5
Female	21	38.1
Race		
Caucasian	415	84.1
Black	58	76.9
Other	18	43.8
Total	491	82.1

Table 3  
1986 Crude Mortality Rates Among Active-duty  
Personnel by Paygrade

Paygrade	No. of Deaths	Mortality Rate per 100,000
E1	35	93.6
E2	41	92.8
E3	75	84.8
E4	91	85.8
E5	104	96.4
E6	47	56.6
E7-E9	38	77.1
W2-W4	3	89.7
O1-O5	53	71.4
O6-O10	4	87.4
Total	491	82.1

Table 4 provides a summary of deaths by occupational category among officer and enlisted personnel. Of the 60 officer deaths the group experiencing the most deaths in 1986 were aviators (n=31). Eighty-eight percent of the deaths (n=431) occurred among enlisted personnel; 11.8 percent of all deaths were among aviation maintenance and weapons personnel whose duties included the maintenance and repair of aircraft engines and electrical components; an additional 10.4 percent of all deaths were among marine engineers who operated and maintained heavy machinery, propulsion equipment and electrical components of engines. Appendix B provides a complete listing of deaths by enlisted occupation. The most deaths occurred among Seamen (n=41), Hospital Corpsmen (n=22), Airmen (n=19), and Electronics Technicians (n=19).

Table 4

Distribution of 1936 Deaths Among Active-duty Officer and  
Enlisted Personnel by Occupational Category

Occupational Category	No. of Deaths	Percent
<b>OFFICER</b>		
<u>Unrestricted Line Officer:</u>		
Surface Warfare	7	1.4
Special Warfare	1	0.2
Submarine Warfare	2	0.4
<b>Aviators:</b>		
Pilot	21	4.3
Naval Flight Officer	10	2.0
Student	1	0.2
<u>Restricted Line Officer:</u>		
Aeronautical Engineering	1	0.2
Intelligence	1	0.2
Special Duty (Engineering)	1	0.2
<u>Staff Corps:</u>		
Medical	3	0.6
Dental	1	0.2
Judge Advocate General	2	0.4
Nurse	1	0.2
Supply	1	0.2
Chaplain	3	0.6
<u>Chief Warrant Officer:</u>		
Operations (Surface)	1	0.2
Communications (Submarine)	1	0.2
Aviation Ordnance	1	0.2
Unknown	<u>1</u>	<u>0.2</u>
	60	12.1

Table 4 (Cont'd)

## ENLISTED

Logistics	23	4.7
Ship Operations	17	3.5
Aviation Maintenance and Weapons	58	11.8
Ship Maintenance	40	8.1
Administration	21	4.3
Health Care	24	4.9
Marine Engineer	51	10.4
Seaman	41	8.4
Airman	19	3.9
Engineerman	13	2.6
Other	<u>124</u>	<u>25.3</u>
	431	87.9
<hr/>		
Total	491	100.0
<hr/>		

Figure 1 provides a graphic summary of 1986 deaths by time in service. Nearly two-thirds of the deaths occurred in members who had been on active duty between 1 and 10 years. Less than 5 percent had less than 6 months time in service and nearly 6 percent had more than 20 years service.

The distribution of active-duty deaths by day of week, shown in Figure 2, appears to be bimodal. The first peak occurs on Monday and Tuesday and the second peak begins on Friday reaching its highest level on Saturday and decreasing on Sunday. Thirty-one percent of the deaths occurred during weekends and 60 percent during the 4-day period Friday through Monday.

Figure 3 provides a comparison of deaths by geographical region within the United States. One-third of the deaths occurred in the South Atlantic region and an additional 29 percent in the Pacific region. Appendix C provides a summary list of deaths by state. It is no surprise that over half of the deaths (n=261) occurred in those coastal states (California, Washington, Florida, South Carolina, and Virginia) where the Navy has its largest concentration of facilities and manpower.

Figure 1

# **DISTRIBUTION OF 1986 DEATHS AMONG ACTIVE DUTY PERSONNEL BY TIME IN SERVICE**

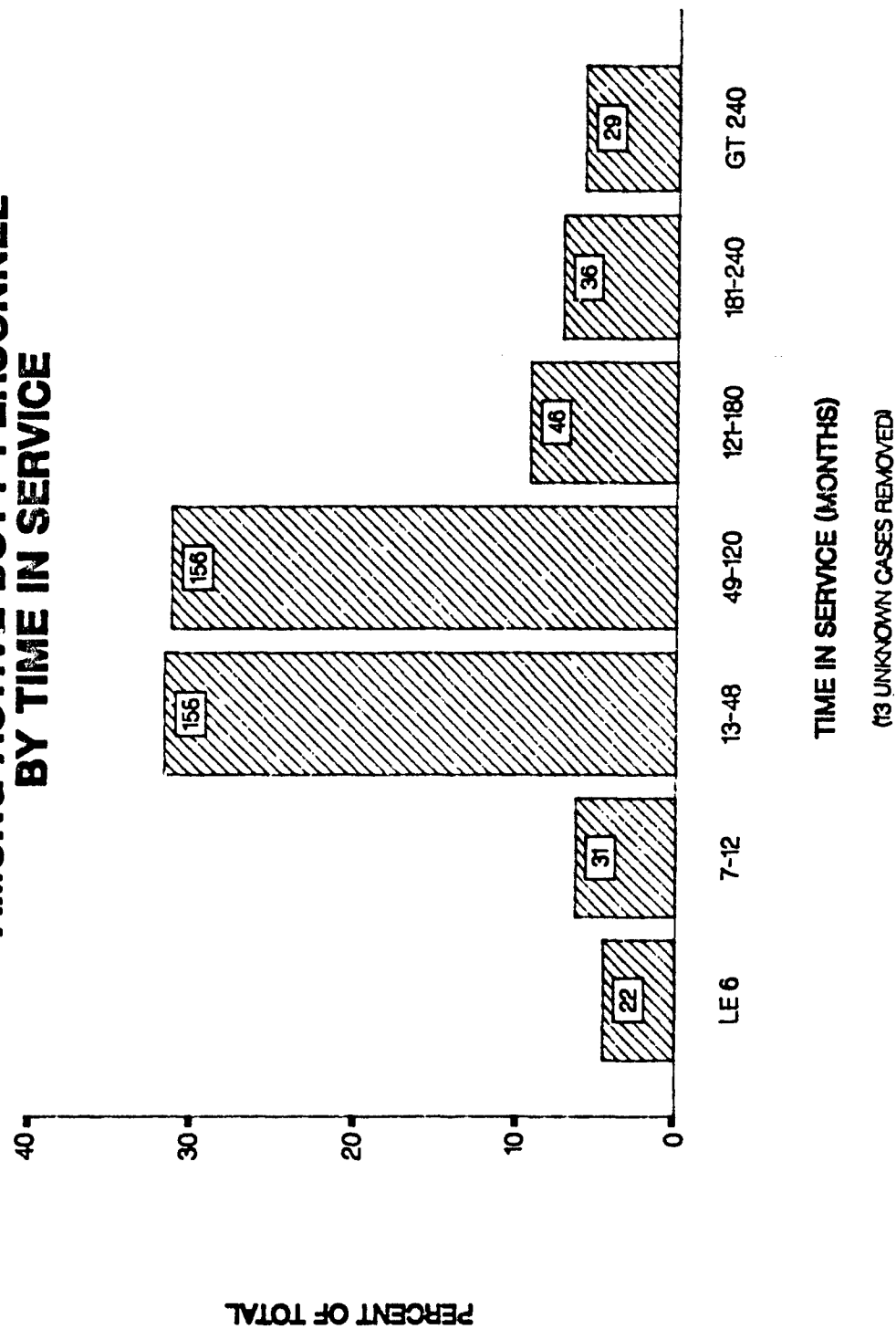


Figure 2

**DISTRIBUTION OF 1986 DEATHS  
AMONG ACTIVE DUTY PERSONNEL  
BY DAY OF WEEK**

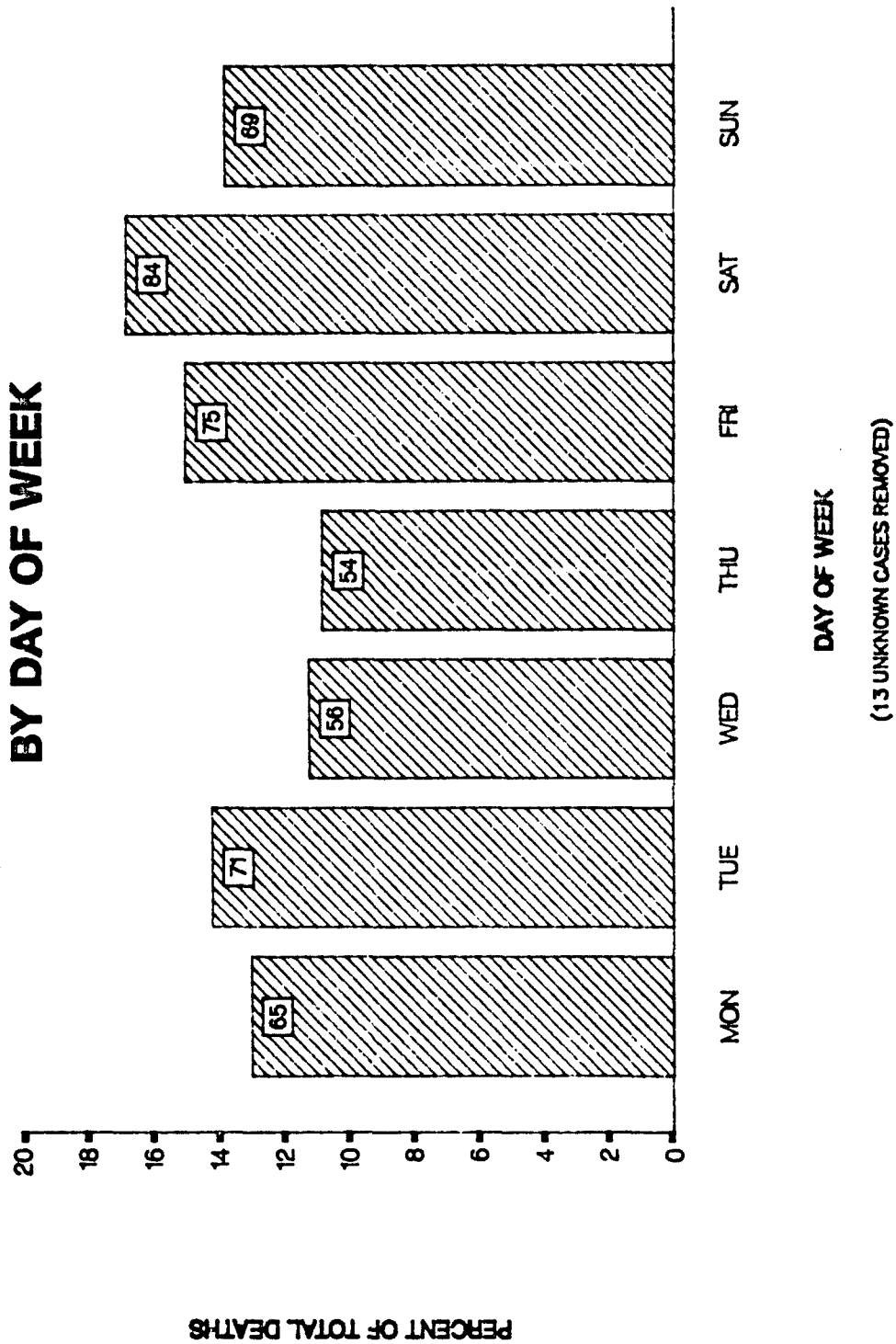
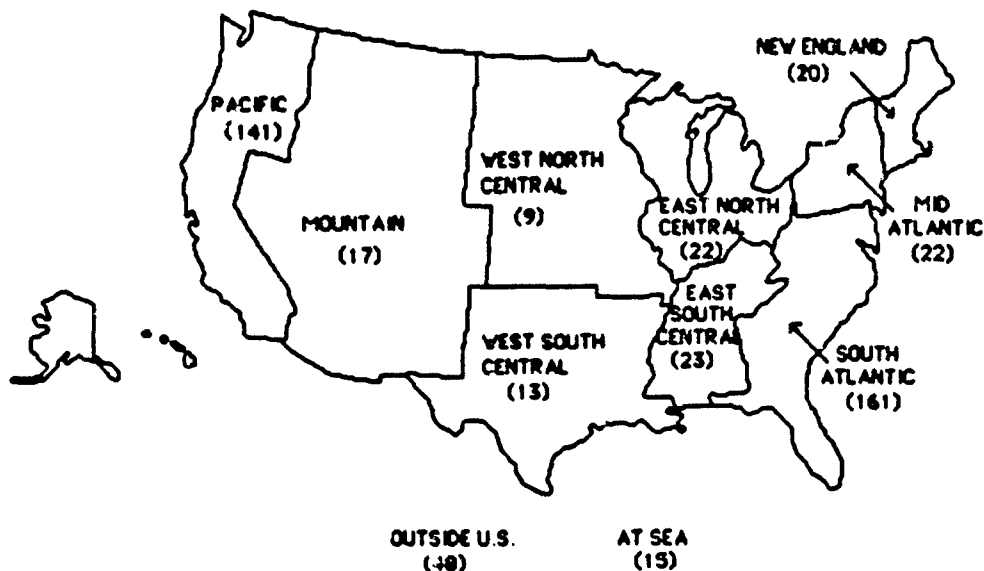


Figure 3  
**DISTRIBUTION OF 1986 DEATHS  
 AMONG ACTIVE DUTY PERSONNEL  
 BY GEOGRAPHIC REGION**

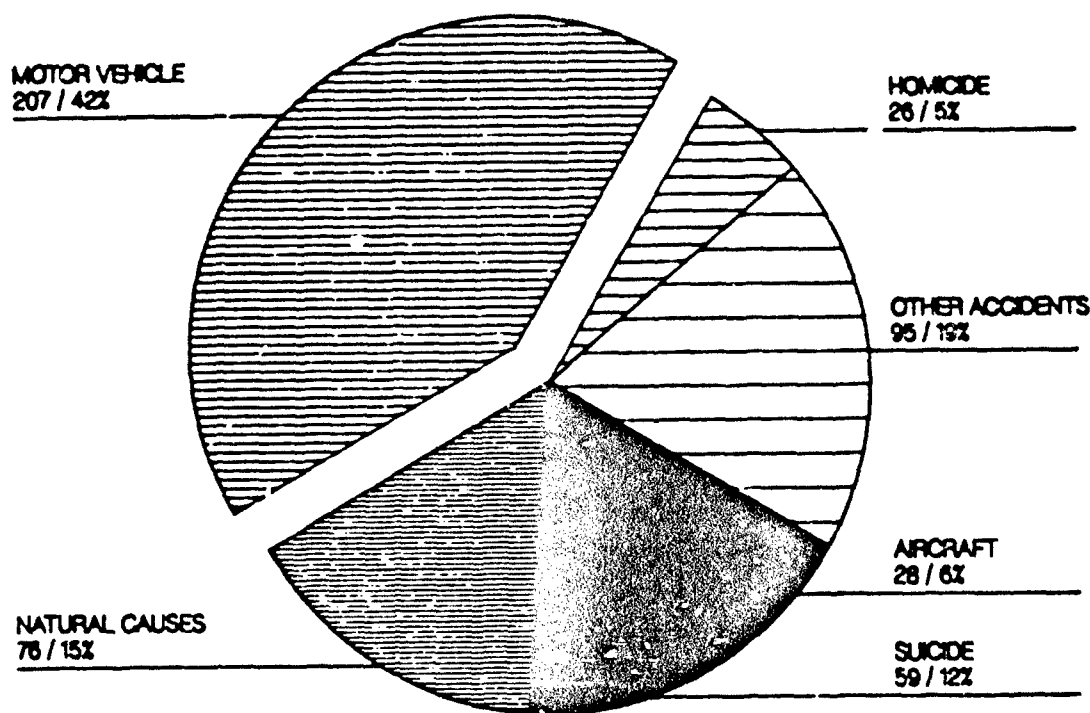


As illustrated in Figure 4 motor vehicle-related deaths were the most frequent cause of mortality in 1986, accounting for 42 percent of deaths. Approximately two-thirds of these deaths (n=126) resulted from accidents involving automobiles, vans, or trucks and one-third (n=76) from motorcycle accidents. Twenty-eight Navy personnel died in aircraft accidents. Twelve percent of 1986 deaths were determined to be suicides and an additional 5 percent resulted from homicides.

Death by natural causes accounted for 15 percent (n=76) of 1986 deaths. Three-quarters of these (n=59) were related to the circulatory system (40 - cardiac arrest, 4 - acute myocardial infarcts, 4 - cerebral hemorrhages, 3 - subarachnoid hemorrhages, 3 - arteriosclerotic heart disease, and 5 - other causes). Seven persons died as a result of neoplasms (3 - lung, 1 - leukemia,



Figure 4  
**DISTRIBUTION OF 1986 DEATHS  
 AMONG ACTIVE DUTY PERSONNEL  
 BY CONTRIBUTING CAUSE**



1 - esophagus, 1 - lymph nodes, 1 - site not specified).

One-fifth of the deaths resulted from other types of accidents. Some of these causes included drowning, physical readiness training, falls, stabbings, gunshot wounds, and asphyxiation.

Table 5 presents age-specific mortality rates for the six primary causes of death including circulatory system-related deaths and neoplasms. The highest rates for suicide (11.1), motor vehicle accidents (51.4) and other

accidents (17.6) occurred in the  $\leq 24$  age group. While the mortality rate for motor vehicle-related deaths steadily decreased as age increased, the rate of homicides remained relatively level across age groups with no deaths occurring in the oldest group. As one would expect the rates of death due to natural causes steadily increased as age increased.

Table 5

Age-specific 1986 Mortality Rates\* Among Active-duty Personnel by Cause of Death

Cause of Death	Age									
	All ages		$\leq 24$		25 - 34		35 - 44		$>45$	
	No. of Deaths	Rate	No. of Deaths	Rate	No. of Deaths	Rate	No. of Deaths	Rate	No. of Deaths	Rate
Motor vehicle										
accidents	207	34.7	143	51.4	50	22.6	13	15.2	1	8.0
Other										
accidents	94	16.1	49	17.6	35	15.9	9	10.5	1	8.0
Suicide	59	9.9	31	11.1	22	10.0	6	7.0	-	-
Aircraft										
crashes	28	4.7	2	0.7	22	10.0	4	4.7	-	-
Homicide	27	4.5	13	4.7	11	5.0	3	3.5	-	-
Natural	76	12.7	12	4.3	17	7.7	32	37.4	15	120.1
(Circulatory)	(59)	9.9	(9)	3.2	(15)	6.8	(25)	29.2	(10)	80.1
(Neoplasms)	(7)	1.2	(1)	0.3	(1)	0.4	(2)	2.3	(3)	24.0
(Other)	(10)	1.7	(2)	0.7	(1)	0.4	(5)	5.8	(2)	16.0
Total	491	82.1	250	89.8	157	71.1	67	78.3	17	136.2

\*Mortality rate per 100,000 based on 1986 average Navy population.

#### Discussion

Use of the Report of Casualty has provided a timely source of mortality data for active-duty Navy personnel who died during 1986. Information from

this report enabled a basic characterization of deaths in terms of age, sex, race, paygrade, occupation, and time, place and cause of death. The cause of death was categorized in broad groups such as accident, suicide, and natural. Definitive diagnostic codes for specific diseases and injuries were generally not provided, and comparisons of cause specific rates should be made very carefully.

Other sources of Navy mortality information are available; however, these data files are not complete and fully edited for several years after the fact. Likewise, national data for the same interval are similarly delayed. Often initial comparisons are made utilizing "provisional" data which is more readily available.

The leading causes of death among Navy personnel in 1986 paralleled those causes identified for all active-duty military personnel in 1981-82<sup>6</sup>. Motor vehicle accidents accounted for 37 percent of DoD active-duty fatalities in the earlier period and 42 percent of the 1986 Navy fatalities. Similarly, deaths due to aircraft accidents, suicide, homicide, and other accidents were high in the Navy in 1986 as they were in other DoD components earlier in the decade.

In general, the leading causes of Navy mortality in 1986, accounting for 85 percent of the deaths, were related to lifestyle factors or behavior rather than to factors associated with disease processes or military conflicts. Interestingly, two primary causes that fall into this latter category, diseases of the heart and circulatory system and cancer, are often discussed in terms of unhealthy lifestyles.

In the U.S. population, however, four of five leading causes of death for 1985 were related to disease processes. Deaths from all accidents and adverse effects, including motor vehicle mishaps, was the fourth leading cause of death. This reflects the older age distribution of the total U.S. population as compared to the Navy population.

The age-specific mortality rates for motor vehicle-related deaths shown in Table 5, were similar to those experienced in the U.S. in 1985. In the 24-34 age group the Navy rate was slightly higher than the U.S. rate (22.6 and 20.8, respectively). However, U.S. rates exceeded Navy rates beginning at age 35; 16.9 and 15.2 among 35-44 year olds and 13.9 and 8.0 for individuals 45 or older.

The Navy age-specific rates for 1986 circulatory system-related deaths and fatal neoplasms also paralleled 1985 national rates. Increases were noted at each age interval in both populations, but the magnitude of change in U.S. rates were much more pronounced. Personnel are no longer in the Navy when these two major causes of death were most prevalent in the general population.

When comparisons of mortality are made between the Navy and the U.S. population, one must keep in mind age-composition differences. Ninety-seven percent of the 1986 Navy population was between the ages of 18 and 44 and only 42 percent of the 1985 general population fell into this age range. Non-disease related circumstances were the prime causes of death among the younger Navy population, whereas natural causes of death were much more common in the older U.S. population.

#### Conclusions

The Report of Casualty is a source of Navy mortality data that provides basic demographic and descriptive information in a shorter time than more traditional sources. NHRC's Death Registry, which contains the Report of Casualty, can now provide comprehensive summaries of annual deaths for specific Navy populations in an efficient and timely manner. Temporal and regional trends can also be more readily observed.

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5. Garland F, Helmkamp J, Gunderson E, et al. A Guide to the Computerized Medical Data Resources of the Naval Health Research Center. Naval Health Research Center, San Diego, May 1987; Report No. 87-13.
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## APPENDIX A

NAVAL MILITARY PERSONNEL COMMAND, DEPARTMENT OF THE NAVY, WASHINGTON, D. C. 20370

<b>REPORT OF CASUALTY</b>		1. REPORT NUMBER AND TYPE		2. DATE PREPARED	
3. SERVICE IDENTIFICATION (Name, Social Security Number, Grade or Rate, Component, Branch and Organization), (MOS/NJC)					
4. CASUALTY STATUS					
a. <input type="checkbox"/> BATTLE <input type="checkbox"/> NON-BATTLE      b. COMMENCED TOUR DATE c. STATUS <input type="checkbox"/> DEATH <input type="checkbox"/> KIA <input type="checkbox"/> MISSING <input type="checkbox"/> MISSING IN ACTION <input type="checkbox"/> CAPTURED <input type="checkbox"/> OTHER _____ (Specify) d. DATE _____ e. PLACE _____ f. CAUSE & CIRCUMSTANCES _____					
5 a. DATE AND PLACE OF BIRTH		b. RACE		c. SEX	
d. RELIGIOUS PREFERENCE					
6. DATE AND PLACE OF LAST ENTRY ON ACTIVE DUTY IN CURRENT STATUS AND HOME OF RECORD AT TIME					
7 a. PAY GRADE		b. BASIC PAY		c. INCENTIVE/ADDITIONAL PAY	
				<input type="checkbox"/> YES <input type="checkbox"/> NO	
d. CHECK IF APPLICABLE					
<input type="checkbox"/> CREW <input type="checkbox"/> PASSENGER					
8. DUTY STATUS					
9. INTERESTED PERSONS (Name, Address, Relationship)					
DATE OF RECORD OF EMERGENCY DATA FORM					
10. REPORT FOR VA TO FOLLOW <input type="checkbox"/> YES <input type="checkbox"/> NO		11. REPORTING COMMAND AGENCY AND DATE REPORT RECEIVED IN DEPARTMENT			
12. PRIOR SERVICE DATA <input type="checkbox"/> YES <input type="checkbox"/> NO					
13. REMARKS					
<b>FOOTNOTES:</b> 1. Adult next of kin. 2. Beneficiary for gratuity pay in event there is no surviving wife or child as designated on record of emergency data. 3. Beneficiary for unpaid pay and allowances as designated on record of emergency data.					
14. DISTRIBUTION		15. SIGNATURE ELEMENT			
		Certified to be a true Certification of Casualty.  Head, Casualty Assistance Branch By direction of the Commander, Naval Military Personnel Command			

DD FORM 1300  
1 FEB 73

REPLACES DD FORM 1300, 1 MAR 60, WHICH IS OBSOLETE

## APPENDIX B

### Distribution of 1986 Deaths by Enlisted Occupation

<u>Occupation</u>	<u>Abbreviation</u>	<u>No. of Deaths</u>	<u>Percent*</u>
Boatswain's Mate	BM	8	1.9
Master-at-Arms	MA	1	0.2
Quartermaster	QM	4	0.9
Signalmen	SM	5	1.2
Operations Specialist	OS	7	1.6
Electronic Warfare Tech	EW	1	0.2
Sonar Tech - Surface	STG	7	1.6
Sonar Tech - Submarine	STS	2	0.5
Ocean Systems Tech	OT	2	0.5
Torpedoman's Mate	TM	3	0.7
Gunner's Mate - Missiles	GMM	1	0.2
Gunner's Mate - Tech	GMT	1	0.2
Gunner's Mate - Guns	GMG	7	1.6
Fire Controlman	FC	4	0.9
Fire Control Tech - Guns	FTG	2	0.5
Fire Control Tech - Missiles	FTM/B	3	0.7
Missile Tech	MT	2	0.5
Mineman	MN	2	0.5
Electronics Tech	ET	19	4.4
Data Systems Tech	DS	2	0.5
Navy Counselor	NC	1	0.2
Radioman	RM	10	2.3
Cryptologic Tech - Technical	CTT	2	0.5
Cryptologic Tech - Admin	CTA	2	0.5
Cryptologic Tech - Maint	CTM	1	0.2
Cryptologic Tech - Comm	CTO	2	0.5
Yeoman	YN	13	3.0
Personnelman	PN	8	1.9
Data Processing Tech	DP	2	0.5
Storekeeper	SK	12	2.8

# APPENDIX B (Cont'd)

Disbursing Clerk	DK	2	0.5
Mess Management Specialist	MS	16	3.7
Intelligence Specialist	IS	2	0.5
Ship's Serviceman	SH	6	1.4
Seaman	SN	41	9.5
Machinist's Mate	MM	17	3.9
Engineman	EN	11	2.5
Machinery Repairman	MR	3	0.7
Boiler Tech	BT	13	3.0
Electrician's Mate	EM	16	3.7
Interior Comm Electrician	IC	3	0.7
Hull Maintenance Tech	HT	15	3.5
Fireman	FN	13	3.0
Construction Electrician	CE	2	0.5
Equipment Operator	EO	7	1.6
Construction mechanic	CM	3	0.7
Builder	BU	1	0.2
Steelworker	SW	1	0.2
Constructionman	CN	2	0.5
Aviation Machinist's Mate	AD	7	1.6
Aviation Electronic's Tech	AT	13	3.0
Antisubmarine Warfare Tech	AX	1	0.2
Aviation ASW Operator	AW	2	0.5
Aviation Ordnanceman	AO	9	2.1
Air Controlman	AC	3	0.7
Aviation Boatswain's Mate - LRE	ABE	2	0.5
Aviation Boatswain's Mate - Fuels	ABF	1	0.2
Aviation Boatswain's Mate - A/C	ABH	2	0.5
Aviation Electrician's Mate	AE	4	0.9
Aviation Structural Mech - Struc	AMS	12	2.8
Aviation Structural Mech - Hydr	AMH	4	0.9
Aviation Structural Mech - Safe	AME	3	0.7
Aircrew Survival Equipmentman	PR	3	0.7
Aerographer's Mate	AG	1	0.2



APPENDIX B (Cont'd)

Tradesman	TD	1	0.2
Aviation Storekeeper	AK	3	0.7
Aviation Sup Equip Tech - Mech	ASM	4	0.9
Photographer's Mate	FH	1	0.2
Airman	AN	19	4.4
Hospital Corpsmen	HM	22	5.1
Dental Technician	DT	2	0.5
Not Reported	-	2	0.5
<hr/> Total		431*	100.0

\*Percentage based on total deaths among enlisted personnel.

# APPENDIX C

## Distribution of 1986 Deaths by State and Geographical Region

<u>State or Area</u>	<u>No. of Deaths</u>	<u>Percent</u>
New England		
Maine	5	1.0
New Hampshire	1	0.2
Massachusetts	3	0.6
Rhode Island	2	0.4
Connecticut	9	1.8
Middle Atlantic		
New York	5	1.0
New Jersey	3	0.6
Pennsylvania	14	2.9
East North Central		
Ohio	6	1.2
Illinois	12	2.4
Michigan	3	0.6
Wisconsin	1	0.2
West North Central		
Minnesota	1	0.2
Iowa	2	0.4
Missouri	3	0.6
South Dakota	1	0.2
Kansas	2	0.4
South Atlantic		
Delaware	2	0.4
Maryland	8	1.6
District of Columbia	2	0.4
Virginia	68	13.9
West Virginia	4	0.8
North Carolina	11	2.2
South Carolina	24	5.0
Georgia	2	0.4
Florida	40	8.2

# APPENDIX C (Cont'd)

## East South Central

Kentucky	2	0.4
Tennessee	7	1.4
Alabama	5	1.0
Mississippi	9	1.8

## West South Central

Louisiana	5	1.0
Texas	8	1.6

## Mountain

Montana	1	0.2
Idaho	2	0.4
Colorado	7	1.4
New Mexico	1	0.2
Arizona	1	0.2
Utah	1	0.2
Nevada	4	0.8

## Pacific

Washington	17	3.6
Oregon	2	0.4
California	112	22.9
Hawaii	10	2.0

## Outside CONUS

48 9.9

## At Sea

Pacific	9	1.8
Atlantic	5	1.0
Other	1	0.2

## Total

491

100.0

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			Mortality			
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<p>Summaries of mortality are useful in describing death within various populations; however, in the Navy, information which annually characterizes death is generally not available until several years after the fact. The objective of this study was to describe deaths among Navy personnel during 1986 by using a source that would provide the most complete information in the shortest time.</p> <p>The Report of Casualty (DD Form 1300), prepared on all active-duty Navy deaths by the Naval Military Personnel Command, provided a comprehensive summary of 1986 deaths (N=491). Information in this report included basic demographic data such as age, sex, race, occupational specialty, and paygrade. Additional information that contributed to a broader description of death included time and place of death and the cause and circumstance associated with death.</p> <p>The highest crude mortality rates occurred in 23-24 year-olds, males, caucasians, and E-5's.</p> <p style="text-align: right;">(Continued)</p>						
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Eighty-eight percent of the 1986 deaths occurred among enlisted personnel; 26 percent of those among marine engineering, aviation maintenance, and weapons specialties. Nearly two-thirds of the deaths occurred in members who had less than 10 years' active-duty. Saturday was the most frequent day of death. One-third of the 1986 deaths occurred in the South Atlantic region and an additional 29 percent in the Pacific. Motor vehicle-related deaths were the most significant contributing cause of mortality accounting for 42 percent of the deaths. ←

The Report of Casualty is a source of Navy mortality data that provides basic demographic and descriptive information in a shorter time compared to more traditional sources. Use of this information will permit more timely observation of temporal and geographic trends.